

6809/2777



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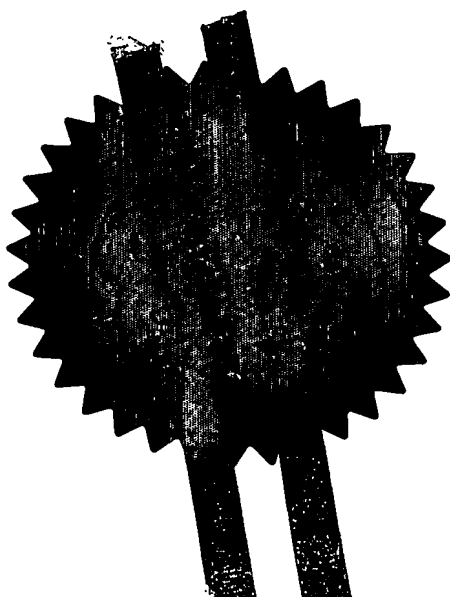
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*R. Mahoney*

Signed

Dated 13 July 2004





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0315301.2

01JUL03 E819075-3 D01821  
P01/7700 0.00-0315301 The Patent Office

# Request for grant of a patent

(See the notes on the back of this form. You can also get an explanatory leaflet from the Patent Office to help you fill in this form)

Cardiff Road  
Newport  
South Wales  
NP10 8QQ

1. Your reference	Jg-2995		
2. Patent application number (The Patent Office will fill in this part)	0315301.2		30 JUN 2003
3. Full name, address and postcode of the or of each applicant (underline all surnames)	THE WAY TO WIN LIMITED Wilsons Corner, 1st Floor, 1 - 5 Ingrave Road, Brentwood Essex CM15 8AP United Kingdom 7628357003 United Kingdom		
Patents ADP number (if you know it)  If the applicant is a corporate body, give the country/state of its incorporation			
4. Title of the invention	A SEAT		
5. Name of your agent (if you have one)	Graham Jones & Company		
"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)	77 Beaconsfield Road, Blackheath, London SE3 7LG		
Patents ADP number (if you know it)	2097001		
6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and (if you know it) the or each application number	Country	Priority application number (if you know it)	Date of filing (day / month / year)
7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application	Number of earlier application		Date of filing (day / month / year)
8. Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer 'Yes' if: a) any applicant named in part 3 is not an inventor, or b) there is an inventor who is not named as an applicant, or c) any named applicant is a corporate body. See note (d))	YES		

# Patents Form 1/77

9. Enter the number of sheets for any of the following items you are filing with this form. Do not count copies of the same document

Continuation sheets of this form

Description

7 ✓

Claim(s)

2

Abstract

2

Drawing(s)

2 + 2 Jm

10. If you are also filing any of the following, state how many against each item.

Priority documents

Translations of priority documents

Statement of inventorship and right to grant of a patent (*Patents Form 7/77*)

2 ✓

Request for preliminary examination and search (*Patents Form 9/77*)

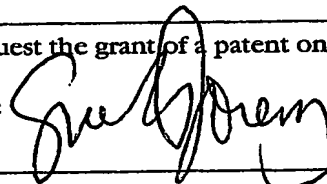
Request for substantive examination (*Patents Form 10/77*)

Any other documents  
(please specify)

11.

I/We request the grant of a patent on the basis of this application.

Signature



Date 30/06/03

12. Name and daytime telephone number of person to contact in the United Kingdom

Mr. G.H. Jones 020 8858 4039

## Warning

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- If you have answered 'Yes' Patents Form 7/77 will need to be filed.
- Once you have filled in the form you must remember to sign and date it.
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## A SEAT

This invention relates to a seat.

There are many different types of seats comprising a seat portion and a backrest portion. The seats are often such that the backrest portion does not offer sufficient lumbar support to the lumbar region of a back of a person sitting on the seat. This is especially so when the seat is sat on by persons of different height and weight because such persons will invariably have different requirements for optimum lumbar support.

It is an aim of the present invention to reduce the above mentioned problem.

Accordingly, in one non-limiting embodiment, the present invention provides a seat comprising a seat portion and a backrest portion; the backrest portion comprising a main part made of a foam material of a first density, and a support portion made of a foam material of a second and different density, and the seat being such that a person sitting on the seat and resting their back on the support portion is able to obtain optimum lumbar support for the back of the person irrespective of the height and weight of the person.

The seat may be one in which the person sitting on the seat and resting their back on the support portion is able to cause the support portion

to adjust its position with respect to the main part in order to obtain the optimum lumbar support.

Preferably, the support portion is such that it increases in thickness in a direction towards the seat portion.

The support portion will usually be a rectilinear support portion. The rectilinear support portion is preferably frusto-conical in shape with the longest sides extending towards the seat portion.

The seat may be one in which the foam material of the first density is harder than the foam material of the second density. Alternatively, the foam material of the first density may be softer than the foam material of the second density.

The seat may include a peripheral frame which extends around the periphery of the backrest portion.

The seat may include a headrest portion.

The seat portion may comprise a main portion and an insert portion, the insert portion being such that it fits into a complementarily shaped recess in the main portion, the insert portion comprising a pair of pads which are positioned so as to be underneath the cheeks of the posterior of a person sitting on the seat portion, the insert portion comprising a pair of legs which are positioned so as to be underneath the thighs of the person sitting on the seat portion, and the insert portion being such that it is able to move in the main portion and thus adjust to seating requirements of the person sitting on the seat.

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The seat portion may give a good degree of comfort to a person sitting on the seat, irrespective of the seat being used at different times by different persons of different heights and weight.

The seat portion may be one in which the pads and the legs have curved faces which engage complementarily curved faces in the recess, thereby to facilitate the movement of the seat portion in the main portion. The movement with the complementarily curved faces can be a sliding/tilting movement.

Preferably, the insert portion is softer than the main portion. With such an arrangement, the insert portion may be made of a foam material of a first density, the main portion may be made of a foam material of a second density, and the first density is a lighter density than the second density.

Preferably, the insert portion does not have any voids of the type used to increase flexibility and/or save material.

The seat portion may include a heating element.

The seat may be any suitable and appropriate seat. Thus, for example, the seat may be a vehicle seat for a vehicle, an aircraft seat for an aircraft, a boat seat for a boat, a domestic seat for domestic use, an office seat for office use, or an industrial seat for use in industrial premises.

Where the seat is a vehicle seat for a vehicle, then the vehicle may be any suitable and appropriate vehicle including a car, van, bus, coach or lorry. Where the seat is a seat for a boat, then the seat may be especially advantageous for ferries where passengers are generally required to sit

together in their seats for the duration of their journey. Where the seat is a domestic seat, then the domestic seat may be a chair, armchair or settee.

An embodiment of the invention will now be described solely by way of example and with reference to the accompanying drawings in which:

Figure 1 shows a seat comprising a seat portion and a backrest portion;

Figure 2 is an exploded view of the backrest portion;

Figure 3 shows an optional headrest; and

Figure 4 is an exploded perspective view of inner components of the seat portion shown in Figure 1.

Referring to the drawings, there is shown a seat 2 comprising a seat portion 4 and a backrest portion 6. The backrest portion 6 comprises a main part 8 made of a foam material of a first density, and a support portion 10 made of a foam material of a second and different density. The support portion 10 is received in a recessed part 12 in the main part 8. The main part 8 and the support portion 10 are able to slide with respect to each other. A person (not shown) sitting on the seat 2 and resting their back on the support portion 10 is able to cause the support portion 10 to adjust its position with respect to the main part 8 and thereby to provide optimum lumbar support for the back of the person irrespective of the height and weight of the person.

The main part 8 is such that it increases in thickness in a direction towards the seat portion 4. As can be seen from the drawings, the increase in the thickness from a top part 14 of the main part 8 becomes more

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substantial towards a bottom part 16 of the main part 8. The increase in thickness is achieved by having a contoured front face of the backrest portion 6 and a substantially flat rear face. The support portion 10 is frusto-conical in shape with the longest sides 18 extending towards the seat portion 4.

The seat may have a peripheral frame (not shown) which extends around the periphery of the backrest portion 6. The seat 2 includes a headrest portion 22. The headrest portion 22 may be of two plastics materials 23, 25 of different densities. The plastics material 23 may be the same as the plastics material for the main part 8. The plastics material 25 may be the same as the plastics material for the support portion 10.

The seat 2 shown in the drawings is a vehicle seat for use in a vehicle, for example a flat back truck or a car.

The seat portion 4 can be of any suitable and appropriate shape and construction. The backrest portion 6 may be adjusted with respect to the seat portion 10 by an adjustor knob 24. If desired, the seat portion may be of a construction which is described and claimed in our co-pending patent application filed herewith and entitled A SEAT.

The seat 2 is provided with upholstery 26 as shown. This upholstery will usually be an appropriate fabric covering. Any suitable and appropriate type of upholstery 26 can be employed. The upholstery 26 used in the backrest portion 6 will usually directly engage the adjacent front face of the support portion 10. The support portion 10 may be made of a rigid plastics material such for example as a moulded plastics material.



As shown in Figure 4, the seat portion 4 comprises a main portion 28 and an insert portion 30. The insert portion 30 is such that it fits into a complementarily shaped recess 32 in the main portion 28.

The insert portion 30 comprises a pair of pads 34 which are positioned so as to be underneath the cheeks of the posterior of the person sitting on the seat portion 4. The insert portion 30 also comprises a pair of legs 36 which are positioned so as to be underneath the sides of the person sitting on the seat portion 4.

The insert portion 30 is such that it is able to move in the main portion 28 and thus adjust to the requirements of the person sitting on the seat portion 4. More specifically, the pads 34 have curved faces 38, and the legs 36 have curved faces 40. The curved faces 38 engage complementarily curved faces 42 in the recess 32. Similarly, the curved faces 40 engage complementarily shaped curved faces 44 in the recess 32. The insert portion 30 is thus able to move in the main portion 28 with a sliding/tilting action.

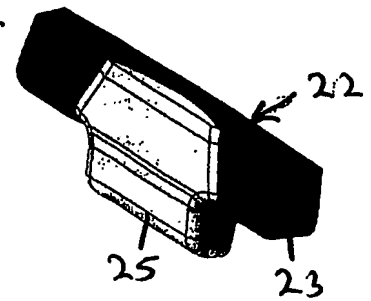
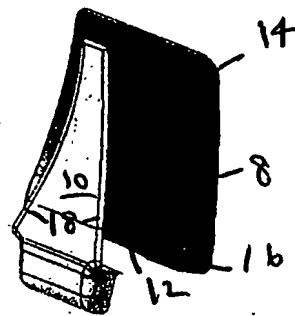
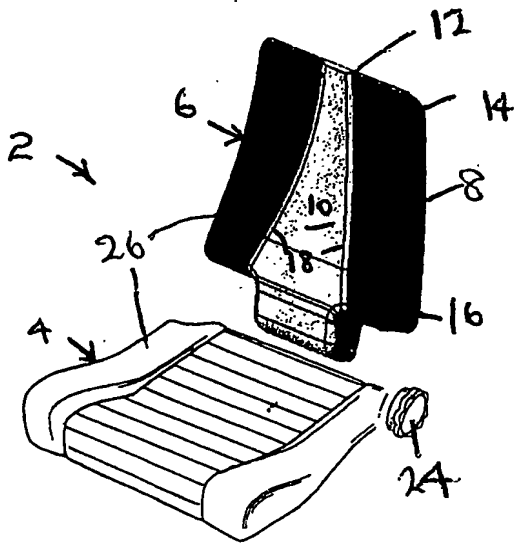
The insert portion 30 is made of a foam material of a first density. The main portion 28 is made of a foam material of a second density. The density of the foam material of the insert portion 30 is lighter than the density of the foam material of the main portion 28 so that the insert portion 28 is softer than the main portion 30. The insert portion 28 does not have any voids of the type used in foam material to increase flexibility and/or save on foam material. Thus, although the insert portion is soft, it provides a good support base for the posterior of the person sitting on the seat portion 4.

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The main portion 28 and the insert portion 30 are covered by the upholstery 26 as shown in Figure 1. Prior to covering with the upholstery 26, a heating element can be laid on top of the insert portion 30 if it is desired to provide the seat 2 with a heated facility for the seat portion 4.

It is to be appreciated that the embodiment of the invention described above with reference to the accompanying drawings has been given by way of example only and that modifications may be effected. Thus, for example, the seat 2 shown in the drawings is a seat for a flat back of a truck but may alternatively be a seat for another type of vehicle, an aircraft seat, a domestic seat, or a seat for any other suitable and appropriate purpose. The backrest portion 6 may be of a shape other than that shown. The foam material for the main part 8 may be softer or harder than the foam material for the support portion 10.

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2/2

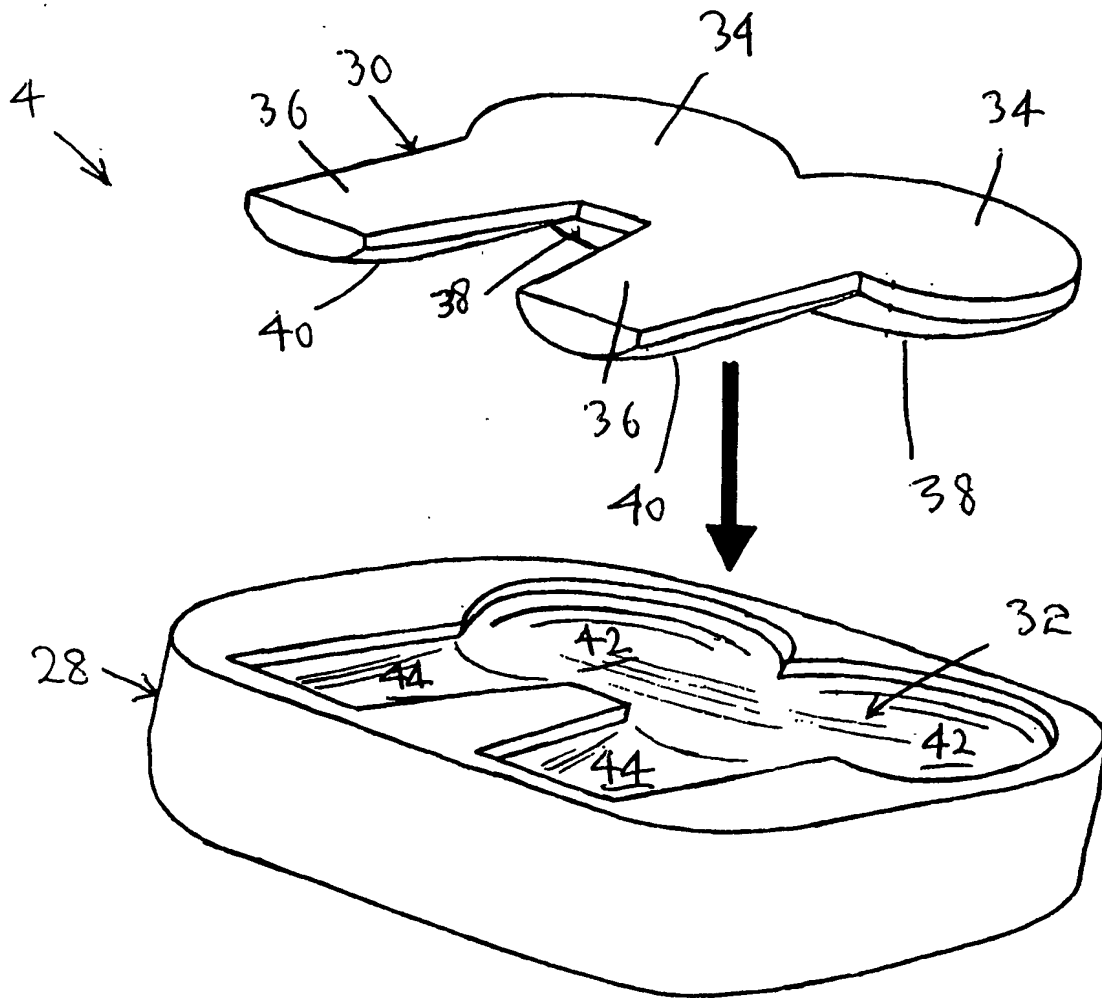


FIG 4

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